IN THE CLAIMS:

Please AMEND Claims 16, 18, 19 and 22-27 and ADD new claims 28 through 51 as follows. Note that all the claims currently pending in this application, including those not currently being amended, have been reproduced below for the Examiner's convenience.

16. (Currently Amended) A projection exposure apparatus, comprising:

an illumination optical system for illuminating a reticle with light from a light source, wherein said illumination optical system includes an optical integrator for producing a secondary light source with the light from the light source, and masking means for restricting an illumination range upon the reticle, which is to be illuminated, with illumination light from the secondary light source;

a projection optical system for projecting a pattern of the reticle, as illuminated, onto a substrate;

measuring means for measuring telecentricity of said projection optical system; and

changing means for changing an incidence angle of the illumination light, to adjust the telecentricity on the basis of the result of the measurement, wherein said ~~adjusting~~ changing means moves an optical element disposed in a portion of said illumination optical system between said optical integrator and said masking means, along an optical axis direction.

17. (Previously Presented) An apparatus according to Claim 16, wherein said optical element is a lens.

18. (Currently Amended) A projection exposure apparatus, comprising:

an illumination optical system for illuminating a reticle with illumination light;

a projection optical system for projecting a pattern of the reticle, as illuminated, onto a substrate;

measuring means for measuring telecentricity of said projection optical system with respect to different image heights, including an on-axis position and an off-axis position;

first changing means for changing an incidence angle of the illumination light , to adjust the telecentricity with respect to the on-axis position, on the basis of the result of the measurement with respect to the on-axis position; and

second changing means for changing an incidence angle of the illumination light to adjust the telecentricity with respect to the off-axis position, on the ~~result of the~~ basis of the result of the measurement with respect to the off-axis position.

19. (Currently Amended) An apparatus according to Claim 18, wherein said illumination optical system includes an optical integrator for producing a secondary light ~~sources~~ source with illumination light supplied from the light source, and wherein said ~~illumination optical system~~ first changing means includes an optical element, which is disposed at a light entrance side of said optical integrator.

Claims 20 and 21 were previously cancelled.

22. (Currently Amended) An apparatus according to Claim [[18]] 19, wherein said illumination optical system includes an optical integrator for producing a secondary light source with light supplied from the light source and wherein said second changing means includes an optical element disposed at a light exit side of said optical integrator.

23. (Currently Amended) An apparatus according to Claim [[22]] 18, wherein said illumination optical system includes an optical integrator for producing a secondary light source with light supplied from the light source and wherein said second changing means includes an optical element disposed at a light ~~entrance~~ exit side of said optical integrator.

24. (Currently Amended) A projection exposure apparatus, comprising:

an illumination optical system for illuminating a reticle with illumination light;

a projection optical system for projecting a pattern of the reticle, as illuminated, onto a substrate;

measuring means for measuring telecentricity of said projection optical system;

changing means for changing an incidence angle of the illumination light, to adjust the telecentricity on the basis of the result of the measurement; and

adjusting means for adjusting an illuminance distribution on a ~~surface to be illuminated~~ substrate, in accordance with a change made by said changing means.

25. (Currently Amended) A device manufacturing method, comprising the steps of:

exposing a wafer with a device pattern ~~by use of~~ in an exposure apparatus ~~as recited in Claim 16~~ in which a reticle is illuminated by an illumination optical system wherein a secondary light source is produced with light from a light source by an optical integrator and an illumination range upon the reticle which is to be illuminated with illumination light from the secondary light source is restricted by masking means, a pattern of the reticle as illuminated is projected onto the wafer by a projection optical system, telecentricity of the projection optical system is measured by measuring means and an incidence angle of the illumination light is changed by changing means to adjust the telecentricity of the basis of the result of the measurement with the changing means moving an optical element disposed in a portion of said illumination optical system between the optical integrator and the masking means, along an optical axis direction; and

developing the exposed wafer.

26. (Currently Amended) A device manufacturing method, comprising the steps of:

exposing a wafer with a device pattern ~~by use of~~ in an exposure apparatus ~~as recited in Claim 18~~ in which a reticle is illuminated with illumination light by an illumination optical system, a pattern of the reticle is projected by a projection optical system, telecentricity of the projection optical system is measured with respect to different image heights including an on-

axis position and an off-axis position by measuring means, an incidence angle of the illumination light is changed to adjust the telecentricity with respect to the on-axis position on the basis of the result of the measurement with respect to the on-axis position by first changing means and an incident angle of the illumination light is changed to adjust the telecentricity with respect to the off-axis position on the basis of the result of the measurement with respect to the off-axis position by second changing means; and

developing the exposed wafer.

27. (Currently Amended) A device manufacturing method, comprising the steps of:

exposing a wafer with a device pattern ~~by use of~~ in an exposure apparatus ~~as recited in Claim 24~~ in which a reticle is illuminated with illumination light by an illumination optical system, a pattern of the reticle as illuminated is projected onto the wafer by a projection optical system, telecentricity of the projection optical system is measured by measuring means, an incidence angle of the llumination light is changed to adjust the telecentricity by changing means on the basis of the result of the measurement and iluminance distribution on the wafer is adjusted by adjusting means in accordance with a change made by the changing means; and

developing the exposed wafer.

28. (New) A scan type projection exposure apparatus, comprising:

an illumination optical system for illumination a reticle with illumination light, said illumination optical system having a variable illumination mode; and

a projection optical system for projecting a pattern of the reticle illuminated by said illumination optical system, onto a substrate;

wherein said illumination optical system includes a movable lens which can be driven for adjustment of telecentricity of said projection optical system, and masking means for regulating an illumination range by the illumination light, said masking means having a slit-like opening which has a width being variable for making uniform an integrated exposure amount during scan exposure, and wherein, in accordance with the change of illumination mode, said movable lens is driven and the width of the opening is adjusted.

29. (New) An apparatus according to Claim 28, further comprising measuring means for measuring the telecentricity of said projection optical system, said measuring means being provided on a stage for holding the substrate.

30. (New) An apparatus according to Claim 29, wherein said measuring means measures axial telecentricity and abaxial telecentricity.

31. (New) An apparatus according to Claim 28, wherein said illumination optical system includes a first optical system for collecting light from a light source onto an optical integrator, and a second optical system for collecting light from said integrator onto the reticla, wherein said second optical system is provided with said movable lens and said masking means.

32. (New) An apparatus according to Claim 31, wherein said first optical system also is provided with said movable lens.

33. (New) An apparatus according to Claim 31, wherein said second optical system includes a condenser lens for collecting light from said integrator onto said masking means, and an imaging lens for imaging the opening of said masking means upon the reticle, and wherein said condenser lens is provided with said movable lens.

34. (New) A projection exposure apparatus, comprising:

an illumination optical system for illumination a reticle with illumination light, said illumination optical system having a variable illumination mode; and

a projection optical system for projecting a pattern of the reticle illuminated by said illumination optical system, onto a substrate;

wherein said illumination optical system includes a first optical element for changing the illumination mode, a second optical element for adjusting telecentricity of said

projection optical system, and a third optical element for adjusting non-uniformness of illuminance upon an image plane of said projection optical system.

35. (New) An apparatus according to Claim 34, further comprising measuring means for measuring the telecentricity of said projection optical system, said measuring means being provided on a stage for holding the substrate.

36. (New) An apparatus according to Claim 35, wherein said measuring means measures axial telecentricity and abaxial telecentricity.

37. (New) A projection exposure apparatus, comprising:

an illumination optical system for illumination a reticle with illumination light, said illumination optical system having a variable illumination mode; and

a projection optical system for projecting a pattern of the reticle illuminated by said illumination optical system, onto a substrate;

wherein said illumination optical system includes an optical member for changing the illumination mode, a first optical element for adjusting axial telecentricity of said projection optical system, and a second optical element for adjusting abaxial telecentricity of said projection optical system, wherein said first optical element is disposed at light entrance side of an optical integrator while said second optical element is disposed at light exit side of said integrator.

38. (New) An apparatus according to Claim 37, further comprising measuring means for measuring the telecentricity of said projection optical system, said measuring means being provided on a stage for holding the substrate.

39. (New) An apparatus according to Claim 38, wherein said measuring means measures axial telecentricity and abaxial telecentricity.

40. (New) A device manufacturing method, comprising the steps of:

exposing a wafer with a device pattern in a scan type projection exposure apparatus in which a reticle is illuminated with illumination light in an illumination optical system having a variable illumination mode wherein a movable lens is driven for adjustment of telecentricity of the projection optical system, an illumination range of the illumination light is regulated by masking means and an integrated exposure amount during scan exposure is made uniform by a slit-like opening in the masking means and the movable lens is driven and the width of the opening is adjusted in accordance with the change of illumination mode; and

developing the exposed wafer.

41. (New) A device manufacturing method according to Claim 40, in which the telecentricity of the projection optical system is measured by measuring means provide on a stage for holding the substrate.

42. (New) A device manufacturing method according to Claim 41, wherein axial telecentricity and abaxial telecentricity are measured by the measuring means.

43. (New) A device manufacturing method according to Claim 40, wherein light from a light source is collected onto an optical integrator in a first optical system in said illumination optical system and light from the integrator is collected by a second optical system in said illumination system onto the reticle, the second optical system being provided with the movable lens and the masking means.

44. (New) A device manufacturing method according to Claim 43, wherein the first optical system is also provided with the movable lens.

45. (New) A device manufacturing method according to Claim 43, wherein a condenser lens in the second optical system collects light from the integrator onto the masking means, the opening of the masking means is imaged in an imaging lens and the condenser lens is provided with the movable lens.

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46. (New) A device manufacturing method, comprising the steps of:

exposing a wafer with a device pattern in a scan type projection exposure apparatus in which a reticle is illuminated with illumination light by an illumination optical system having a variable illumination mode and a pattern of the reticle illuminated by the

illumination optical system is projected by a projection optical system, wherein the illumination mode is changed by a first optical element in the illumination optical system, the telecentricity of the projection optical system is adjusted by a second optical element in the illumination optical system and non-uniformness of illuminance of upon an image plane of the projection optical system is adjusted by a third optical element in the illumination optical system; and

developing the exposed wafer.

47. (New) A device manufacturing method according to Claim 46, wherein the telecentricity of the projection optical system is measured by measuring means provided on a stage for holding a substrate.

48. (New) A device manufacturing method according to Claim 47, wherein axial and abaxial telecentricity is measured by the measuring means.

49. (New) A device manufacturing method, comprising the steps of:

exposing a wafer with a device pattern in a scan type projection exposure apparatus in which a reticle is illuminated by illumination light of an illumination optical system having a variable illumination mode and a pattern of the reticle illuminated by the illumination optical system is projected onto a substrate by a projection optical system, wherein the illumination optical mode is changed by an optical member in the illumination optical system, axial telecentricity is adjusted by a first optical element disposed at a light entrance side of an

optical integrator in the illumination optical system and abaxial telecentricity of the projection optical system is adjusted by a second optical element disposed at a light exit side of the integrator in the illumination optical system; and

developing the exposed wafer.

50. (New) A device manufacturing method according to Claim 49 in which the telecentricity of the projection optical system is measured by measuring means provided on a stage for holding the substrate.

51. (New) A device manufacturing method according to Claim 50, wherein axial telecentricity and abaxial telecentricity are measured by the measuring means.